

Translation

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PATENT COOPERATION TREATY

PCT/JP2003/013832



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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference JSONY-451PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2003/013832	International filing date (day/month/year) 29 October 2003 (29.10.2003)	Priority date (day/month/year) 20 November 2002 (20.11.2002)
International Patent Classification (IPC) or national classification and IPC G11C 11/407		
Applicant SONY CORPORATION		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☐ (sent to the applicant and to the International Bureau) a total of \_\_\_\_\_ sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Box No. I    | Basis of the report   |
| <input type="checkbox"/> Box No. II              | Priority  |
| <input type="checkbox"/> Box No. III             | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/> Box No. IV              | Lack of unity of invention  |
| <input checked="" type="checkbox"/> Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input checked="" type="checkbox"/> Box No. VI   | Certain documents cited   |
| <input type="checkbox"/> Box No. VII             | Certain defects in the international application  |
| <input checked="" type="checkbox"/> Box No. VIII | Certain observations on the international application   |

Date of submission of the demand 24 March 2004 (24.03.2004)	Date of completion of this report 20 March 2005 (20.03.2005)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/013832

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP03/13832

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)

Claims

3-10, 12-14, 16-17

YES

Claims

1, 2, 11, 15

NO

Inventive step (IS)

Claims

4-10

YES

Claims

1-3, 11-17

NO

Industrial applicability (IA)

Claims

1-17

YES

Claims

NO

## 2. Citations and explanations (Rule 70.7)

Document 1: JP, 2001-135080, A (Matsushita Electric Industrial Co., Ltd.), 18 May, 2001 (18.05.01), paragraphs [0008], [0009] and [0013], Fig. 8, & US, 6349072, B1

Document 2: JP, 8-255107, A (Toshiba Corp.), 1 October, 1996 (01.10.96), full text, Fig. 3

### Claims 1 and 2

The subject matters of claims 1 and 2 do not appear to be novel or to involve an inventive step, since they are described in document 1 (paragraphs [0008], [0009] and [0013] and Fig. 8) newly cited in the IPER.

### Claim 3

The subject matter of claim 3 does not appear to involve an inventive step in view of document 1 and document 2 cited in the ISR.

It is well known that the address of the memory cell in a request signal and the address of data temporarily held in an amplifier are compared to judge whether or not a page is hit.

### Claims 4-10

The subject matters of claims 4-10 appear to involve an inventive step in view of documents 1 and 2.

Documents 1 and 2 do not describe that when the address of a requested memory cell and the address of data of an amplifier are compared and found not to agree with each other, an instruction is given to collectively process charge storing action, charge taking out action and input/output action at a time with a single clock used as synchronous timing. This constitution exhibits an advantageous effect that highly efficient data processing can be carried out.

### Claims 11 and 15

The subject matters of claims 11 and 15 do not appear to be novel or to involve an inventive step, since they are described in document 2 (Fig. 3).

### Claims 12-14, 16 and 17

The subject matters of claims 12-14, 16 and 17 do not appear to involve an inventive step in view of documents 1 and 2.

As described in document 1 (paragraphs [0008], [0009] and [0013] and Fig. 8), a person skilled in the art could have easily combined a read/write cycle and a pre-charge cycle into one cycle in the case where the frequency is low.

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## Box No. VI Certain documents cited

### 1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
JP 2004-259318 A [E, X]	16.09.2004	24.02.2003	

### 2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claim 4 describes "in the order of ... the input/output action of the said amplifier for the outside of the said information storage and the charge taking out action for taking out the charges existing in the range from the said memory cell to the said amplifier," but this order is considered to be reverse.

This applies also to claim 8.

2. In claim 8, "when ... agrees with" is considered to be an error for "when ... does not agree with."

3. Claim 10 describes as if the order of the input/output action and the charge storing action is changed in response to the frequency of a synchronous clock, but "The Best Modes for Carrying Out the Invention" of the present application describes to the effect that whether the input/output action and the charge storing action are carried out in different cycles or in one cycle is selected in response to the frequency of a synchronous clock. The descriptions do not match.